Dr. Kenneth L. Telschow

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Education
Dr. Kenneth L. Telschow received his B.S. (1969) and Ph.D. (1973) degrees in Physics from UCLA.

Experience and Achievements
Dr. Telschow is currently an R&D scientist at the Idaho National Laboratory (INL). He spent two years as a postdoctoral research associate at the University of Massachusetts Amherst studying superfluid flow properties of liquid helium using acoustic "3rd Sound" methods. Subsequently, Dr. Telschow taught physics and acoustics in the Physics Department at Southern Illinois University-Carbondale as an assistant and then associate professor. In 1984, Dr. Telschow came to the INL and has since been instrumental in establishing laser based acoustic methods for material property measurements in high temperature and nuclear radiation environments.

Dr. Telschow's background and interests are in the fields of acoustic and ultrasonic properties of microstructures and condensed phases of the solid state, condensed matter and quantum liquids. Over the past decade, he has actively contributed to the development of noncontacting laser ultrasonics for materials characterization from kHz to GHz and length scales from centimeters to microns through sensing of physical and microstructural properties. He is one of the inventors of a new imaging ultrasonic sensor, called the INL Laser Ultrasonic Camera that images subnanometer acoustic and ultrasonic motions through dynamic holography using photorefractive nonlinear optics. Dr. Telschow's work has led to the publication of more than 100 journal articles and conference proceedings.

INL'S LIFETIME ACHIEVEMENT AWARD FOR INVENTORSHIP

Patents

- U.S. Patent 4,995,260 - Nondestructive Material Characterization
- U.S. Patent 5,048,969 - Piezoelectric Measurment of Laser Power
- U.S. Patent 5,103,676 - Method of Noncontacting Ultrasonic Process Monitoring
- U.S. Patent 5,535,006 - Method and System for Evaluating Integrity of Adherence of a Conductor Bond to a Mating Surface of a Substrate
- U.S. Patent 5,827,971 - Optical Vibration Detection Spectral Analysis Assembly and Method for Detecting Vibration in an Object of Interest
- U.S. Patent 6,134,006 - Imaging Photorefractive Optical Vibration Measurement Method and Device
- U.S. Patent 6,175,411 - Apparatus and Method for Measuring and Imaging Traveling Waves
- U.S. Patent 6,401,540 - Method and Apparatus for Detecting Internal Structures of Bulk Objects Using Acoustic Imaging
- U.S. Patent 6,486,962 - Method and Apparatus for Assessing Material Properties of Sheet-Like Materials
- U.S. Patent 6,836,336 - Inspection System Calibration Methods